4086

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: New York

11—5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. 4086

LOCALITY:

Gravesend Bay.

1919

CHIEF OF PARTY:

Senior, Jack - Winslow

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DESCRIPTIVE REPORT.

Hyd. Sheet No. 4086.

LOCALITY:

Gravesend Bay

1919

CHIEF OF PARTY:

Descriptive Report to accompany Hydrographic Sheet No. ____,

Gravesend Bay, New York.

Scale 1: 10,000

REVISION:-

This sheet is a re-survey of the area covered by Hydrographic Sheet ____ Register No. 1664. The old survey was made in 1885 on a similar scale 1: 10,000. Changes in depths have occurred since then, especially inside of the 2 fathom curve. The present survey approximately covers the area east of line between Fort Hamilton and Norton Points. The channels leading into Marine Basin and into Coney Island Creek, and depths of water inside of Marine Basin and alongside the more important piers have been closely developed.

LIMITS; LANDMARKS; COAST:-

These subjects are covered in report accompanying topographic sheet.

DANGERS:-

That part of Gravesend Bay which lies northward of a line joining Norton Point and Ulmer Park Pier is of fairly uniform depth and apparently clear of dangers. South of that line the bottom is very irregular and the water is shallow. South of the dredged channel into Marine Basin, the water shoals very rapidly. Four feet depths and less are found off the southwest face of Basin and off the south side. There are many shoals and sunken dangers in the southern end of Bay, especially just south of Marine Basin and off

entrance to Coney Island Creek. Outside of entrance to Creek, dredging is still going on and considerable quantities of sand are being taken out. The above fact accounts probably for the deep soundings that were obtained very close to shoal water.

CHANNELS; SAILING DIRECTIONS:-

Depths of 13 feet at low water can be carried into Marine Basin and 15 or 16 feet at high water. Boats drawing 9 feet can enter Coney Island Creek at low water, but the channel is very narrow and crooked with many dangers to be guarded against. The following courses when making for Marine Basin or entering Coney Island Creek are safe: To enter Marine Basin head well into the bay from a point $\frac{1}{2}$ mile south of Fort Hamilton Point, on a course 100° true (mag.) to a position about $\frac{1}{3}$ mile NW x N of Ulmer Park Pier and with end of pier in range with yellow house on end of Marine Basin. Then steer 145° true (mag.) to pass not more than 50 meters off end of pier; when abeam of pier turn sharply and head for entrance to basin, steering 132° true (mag.). To enter Coney Island Creek, from a position about $\frac{1}{2}$ mile north of tall white flag pole on north side of Norton Point, a course of 117° true (mag.), heading for twin black stacks, will, if closely followed, give a channel of 9 feet at mean low water. The channel is very narrow southwest of Marine Basin, where dredging is still in progress. A similar depth of water can be obtained by passing 75 meters north of end of piers on north side of Norton Point, on a course 90° true, heading for end of wooden breakwater, then steering course as mentioned above.

ANCHORAGES:-

Gravesend Bay affords fair anchorage in 11 to 18 feet, but the southwesterly part of the bay, southward of a line joining Norton Point and Ulmer Park pier is shoal and bottom is very uneven .The bay is exposed to strong winds from the S. W. and has considerable current. Many small craft anchor close to shore just north of Ulmer Park pier and south of Marine Basin in 4 to 10 feet of water, mud bottom.

SURVEY METHODS:-

The survey of Gravesend Bay was made with launch ELSIE 111 and a small motor cutter loaned for this work from the Navy. A heavy dory in addition to an improvised drag was used to decrease speed of launch ELSIE to enable close development while sounding continuously. The motor cutter KIVA was used together with drag for the inshore work. The two boats were lashed together side by side. The leadsman, recorder, and one other man, were in the dory ; the rest of party in motor cutter. All soundings were taken with hand lead, using 8 lb. weight. The line was marked to feet and fathoms.

An entire new and inexperienced crew was engaged for this work. For that reason and the fact that considerable current was encountered, straight sounding lines were not accomplished. The area called for in the instructions, however, has been closely developed. Soundings were checked and are reliable. On the boat sheet soundings are shown with only an approximate reduction for tide applied. Due to wetting of boat sheet, some of the position numbers in development

of area at entrance to Coney Island Creek have become effaced and will be hard to follow. All positions, however, have been plotted and sufficient soundings shown. The sounding volumes have necessary remarks for plotting all positions. Cross soundings in a few places at Coney Island Creek entrance do not seem to check but that is due to the fact that the bottom is very irregular, only a few meters causing a marked change in depth. These soundings will show better on smooth sheet.

Very Respectfully,

Jack Senior

Jack Senior
Jr. Hyd. & Geod. Engr.

HYDROGRAPHIC SIGNALS: The following are descriptions of the signals used:-

Clock Tower:- Pinnacle of white clock tower on the Brooklyn Polytecknic Preparatory Country Day School fronting on 92nd. St. between 7th. Avenue and Battery Avenue, Cropsey Avenue on the south.

Tal:- Tall white flag pole on water front of the Marine and Field Club on Cropsey Avenue at the foot of Bay 13th. St. The club flag is blue-white-blue and the three signal lights on the pole are all white.

Lo:- Flag pole with weather vane attached, on the roof of the Ft. Lowry Hotel. This hotel is situated on the water front at the foot of 17th. Avenue.

Cod:- Tall flag pole on water front of the Bensonhurst Yacht Club on the corner of Cropsey and 20th. Avenues. The club flag consists of alternate stripes of red and white (4 red and 3 white). The three signal lights on the pole from the top down are white-red-red.

Flag:- Flag pole in ground along water front of the Brooklyn Motor Boat Club on Cropsey Avenue between 23rd. Avenue and Bay 32nd. St. The club flag is red-white-blue and the three signal lights from the top down are red-white-green.

Kim:- Square chimney an abandoned factory on south side of Harway Avenue between 25th. Avenue and Cropsey Avenue.

Yel:- Yellow cupola on roof of the club house of the Gravesend Bay Yacht Club situated on the water front at foot of the extension of 25th. Avenue

Far:- Flag pole of a Standard Oil Company Oil Station flying American Flag, on far end of Ulmer Park Pier. This pier is at the foot of the extension of 25th. Avenue.

Mar:- Flag pole on lookout on Naval Office at the far end of the south pier of the U. S. N. Marine Basin.

Pipe:- Black iron standpipe with bell top in plant of the Grant Brick Company on Bay 47th. St. below Harway Avenue.

Chase:- Tall yellow brick chimney in N. W. corner of Steeplechase Park near entrance to Ranenhall's Baths on Surf Avenue opposite foot of W. 19th. St.

Stack:- The north of two black iron stacks on plant of the Borough Wire Iron, Marine and Machine Works, situated on south side of Neptune Avenue between W. 20th. and W. 21st. St.

How:- Flag pole on roof of green house fronting on the north side of Neptune Avenue between W. 30th and W. 31st. St. and built out into the water.

Club:- Tall white flag pole on grounds of the Atlantic Yacht Club at Sea Gate flying club flag of white and red. The color of the three signal lights from the top down are red-green-red.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

July 29, 1924.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4086

Gravesend Bay, New York

Surveyed in 1919

Instructions dated May 10, 1919

Chief of Party, Isaac Winston.

Surveyed by Jack Senior

Protracted and soundings plotted by P. B. Castles and J. D. Torrey.

Verified and inked by P. B. Castles and F. M. Albert.

1. The records conform to the requirements of the General Instructions except that bottom characteristics and boats' courses were rarely given.

2. The plan and character of development satisfy the specific instructions.

3. The plan and extent of development satisfy the specific instructions.

4. The sounding line crossings are adequate. At the entrance to Coney Island Creek and the approach to the Marine Basin the discrepancies in crossings are undoubtedly due to dredging in progress.

5. The usual field plotting was done in the office.

6. No further surveying is required to supply deficiencies. The entrance to Coney Island Creek and the approach to the Marine Basin are probably very different at the present time as a result of dredging.

7. The latest U. S. Engineer report shows that the Corps of Engineers are not making any improvements in these two areas at present, but it is suggested that the New York Inspector inquire at the Department of Docks and Ferries if the latter organization has not some information regarding these areas.

8. The character and scope of the surveying are good.

9. Reviewed by E. P. Ellis, July, 1924.

U. S. Coast and Geodetic Survey

E. Lester Jones, Superintendent

New York

Hydrography

Resurvey of

Gravesend Bay

July and August

1919

Work done by

Jack Senco, Jr. H. & G. Engineer.

Chief of Party

Isaac Winston

H. & G. Engineer

Hyd. 4086

Remarks

GRAVESEND BAY, N.Y. Hydrographic Sheet 4086.

Records poorly kept - change of courses under "Remarks" rarely mentioned.

Bottom characteristics shown under wrong column and too few given. Bottom mentioned but 13 times in six days of soundings. Notes under "Remarks" relative to starting, stopping and change of course should correspond with sounding time - also many notations under this column, regarding conditions, on the working ground, greatly assist the plotter in making an accurate reproduction of existing conditions.

Poor selection of signals in many cases prevented accurate plotting - which may account for poor crossing of lines.

For this depth of water the general crossings are poor. Also the uncertain handling of boat does not give the development of the bottom called for.

At position 97 B a sunken object was struck but not investigated.

P.B. Castle.

The work contained in vol. 3 was plotted and inked in June-July 1924.

The criticisms covering this volume follow.

There were no bottom specimens recorded nor were any courses given.

The time of sounding was often erratic and in some cases the time had to be disregarded and soundings spaced equidistant.

Otherwise the records were well kept and the notes giving positions of soundings unusually complete.

The protracting and plotting of soundings were excellent

Frank M. Albert, Draftsman
Section of Field Records.

July 17, 1924.

Hydrography + Topography on the same sheet.

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: New York.

11—5613

DESCRIPTIVE REPORT.

~~Hydrog.~~ ~~Topog.~~ Sheet No. 4086

LOCALITY:

Gravesend Bay.

1919

CHIEF OF PARTY:

Descriptive Report to Accompany Topographic Sheet No _____, Gravesend Bay, New York

Scale 1:10000

REVISION:-

This work is a resurvey of shoreline on Sheet No ____ (Gravesend Bay). The original survey was done in 1885, on a similar scale, 1:10000. Due to natural and artificial causes, the coast line, in places, has since changed. Also, various improvements, since made, are of sufficient importance to be accurately charted. A topographic survey was necessary also, to locate sufficient signals for the hydrographic survey which followed. Instead of revising here and there, the entire shoreline was re-run, locating all piers, improvements, etc. This sheet, however, covers only the immediate shoreline, and is not a complete topographic survey as an original sheet would be. The present sheet necessarily differs in many places from old survey. Most of the discrepancies, due chiefly to improvements made since 1885, have been corrected, and are shown approximately correct on present chart of New York Harbor-No. 369.

LIMITS:-

This sheet extends from N. Lat. 40° 34' to 40° 37' and from West Long. 73° 58' to 74° 02'. It covers the shoreline of Gravesend Bay, from Fort Hamilton Point on the north, to Norton Point on the south. The work was done under the direction of Isaac Winston, H. & G. Engr. The survey was made in July, 1919, by a party

from Launch ELSIE 111, in charge of Jack Senior, Jr. H. & G. Engr.

GENERAL DESCRIPTION OF COAST:-

The coast line of Gravesend Bay is, in general, low, sandy, and featureless. The coast around Fort Hamilton is steep and rocky, about 25 feet high, with grassy land on its summit. A sand and gravel ledge extends out for 100 meters from the shore, just east of the point. Low grassy land, fronted by a fine sand beach, runs from end of military reservation to Pil. The stretch of coast line from Pil to a little beyond Cod, is of earth and gravel formation, rather steep, and fronted by a board walk. The land directly back of the coast is flat, about 15 feet high, and is covered with grass and trees. There are a number of beautiful summer hotels along this stretch of coast. From Cod to Ulmer Park Pier the shore is low and grassy, and is fronted by a wide sand beach. The neck of land between Ulmer Park Pier and Marine Basin is bounded on the outside by a wooden wall. This fill is now of absolutely permanent character. From Marine Basin to Coney Island Creek, the shoreline is low and sandy, with a few grassy patches, and is covered with small wooden huts. There is an extensive fill north of entrance to Creek, confined by a wooden wall, which is still of a shifting nature. Neptune Avenue, a well-paved highway runs along the coast to Norton Point, and marks the southern boundary of Bay. Norton Point is low, sandy and of a shifting nature. The western side is a gravel bluff of about 15 feet elevation. The eastern side of Norton Point is still being filled in and extended,

and the high and low water lines are indefinite.

LAND MARKS:-

The following land marks are described in full under "DESCRIPTION OF STATIONS".

Clocktower:- Pinnical of white clock tower of the Polytecknic Preparatory Country Day School is conspicuous.

Mar:- The yellow house on S. W. corner of Marine Basin is helpful when making for the basin.

Far:- Marks end of Ulmer Park Pier and is useful in following channel into Marine Basin.

Chase:- Tall chimney at N. W. corner of Steeplechase Park; has the work Steeplechase painted on it in white letters. This chimney and tall tower alongside of it show well from seaward.

Club:- Tall, white flag pole on grounds of Atlantic Yacht Club on North side of Norton Point. This flag and large club house near it show well from northward.

Tow:- Very high tower in Steeplechase Park. This tower and tall chimney (Chase) near it show well from seaward.

SURVEY METHODS:-

The triangulation controlling this survey was made by a party from Str. RANGER. The triangulation stations, South Doubleday, Bensonhurst, and Coney Island Light, were occupied, and other objects were located by intersections, 3 cuts being obtained in most cases. The triangules were computed and geographic positions plotted on sheet. The topographic survey was run as a

traverse between triangulation stations, constant resections being obtained as a check on readings. No adjustment was necessary. Coney Island Creek was traversed as far as shown, but with no check on the ending point.

Very Respectfully

Jack Senior

Jack Senior.

U. S. Coast and Geodetic Survey

E. Lester Jones Superintendent

New York

Topography

Revision of Shore Line

Gravesend Bay

July and August

1919

Work done by

Jack Nevin, Jr. H. & G. Engineer.

Chief of Party.

Isaac Winston,

H. & G. Engineer.

Hyd. - 4086.

Remarks

GRAVESEND BAY, N.Y. Hydrographic Sheet 4086.

Records poorly kept - change of courses under "Remarks" rarely mentioned.

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P. B. Castle

ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 41-EMK

FIELD RECORDS (C)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 3, 1920.

Division of Hydrography and Topography:

Division of Charts:

Tidal reductions are approved in
1 volume of sounding records for

HYDROGRAPHIC SHEET 4086

Gravesend Bay, N.Y.
Isaac Winston in 1919

Plane of reference is
Mean low water, reading

2.5 ft. on tide staff at Norton Pt., N.Y.

Condition of records, very satisfactory.

G V Rude

Chief, Section of Tides
and Currents.

Forwarded

W G Parker

Chief, Division of Hyd'y & Top'y

ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 41-EMK

FIELD RECORDS (C)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

November 24, 1919.

✓ Division of Hydrography and Topography:

✓ Division of Charts:

Tidal reductions are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4086

Gravesend Bay, N.Y.
Isaac Winston, in 1919.

Plane of reference is
Mean low water, reading

2.5 ft. on tide staff at Norton Point.

G V Rude

Chief, Section of Tides
and Currents.

Forwarded to Charts
WWG